TRANSACTIONS

OF THE

CHICAGO SURGICAL SOCIETY

Stated Meeting, April 6, 1906.

The President, DR. D. A. K. STEELE, in the Chair.

TABETIC DISEASE OF KNEE-JOINT.

DR. DANIEL N. EISENDRATH presented two cases of tabetic disease of the knee-joint, one in a woman, aged forty-five, and the other in a man, aged sixty. In both cases the most marked pathological feature was the enormous enlargement of the lower end of the femur, as shown by the X-ray. In one case this was so marked as to simulate an osteosarcoma of the lower end of the femur (see Fig. 1). This latter patient had been sent to the speaker with such a diagnosis. Examination of the patient, however, confirmed the diagnosis of tabes dorsalis. Another interesting feature of both cases was a marked increase in lateral mobility, especially in an outward direction. This was due to the enormous distention of the capsule, and subsequent stretching of the ligaments. Operative treatment had been advised in both cases, on account of this laxity of the joint. Resection of the ends of the bones was indicated in preference to amputation above the knee. A number of cases have been reported in which such typical resections have resulted satisfactorily.

Dr. Eisendrath also showed a patient upon whom he had performed nephrectomy for unilateral septic nephritis.

THE TECHNIQUE OF OPERATIONS UPON THE HEAD AND NECK.

DR. GEORGE W. CRILE, of Cleveland, Ohio, read a paper with the above title.

DR. ARTHUR DEAN BEVAN said that he had seen Dr. Crile operate on a neck case a short time ago, at the Lakeside Hospital, in Cleveland, when he employed the general technique which he had described, such as the elevated position of the patient's head, with rubber suit, etc., and with this elevated position of the patient's head the speaker was sure that the field of operation was maintained in a condition where there was much less blood, and where the dissection was much easier than in any case of neck work he had ever seen.

He had not had the opportunity to use temporary clamping of the common carotid artery in any of his surgical work on the neck. He expressed himself as having been a pessimist (and he was not at all proud of it) as to the general proposition of carcinoma of the head and neck with glandular involvement. He thought his position was now about what Dr. Crile's had been in the past as to the results which could be obtained by radical surgical treatment. His own surgical results had certainly been discouraging when there was evident glandular involvement in carcinoma. He was quite sure, however, that the position which Dr. Crile had taken was the correct one, as had been demonstrated without much doubt in connection with carcinoma of the breast, namely, that if we were to obtain radical results by surgical means, the operations must be exceedingly radical; that the operation must be so wide and sweeping as to remove the regional involvement, or else we would sooner or later get a recurrence.

He had been impressed with the desirability of the point which Dr. Crile mentioned in connection with the removal of the internal jugular vein in a number of these cases. He knew that in some of his earlier work he had attempted to leave the internal jugular vein and to dissect out the glands in close contact with it, which were grossly involved—a very stupid error, he now thought —and yet he had been governed by an early bias which led him to attach too much importance to the jugular vein as an important part of the economy. The internal jugular vein undoubtedly could be removed with little more risk than was involved in the

FIG. 1.—Tabetic disease of knee-joint.

FIG. 2.—X-ray of a tabetic knee-joint. Note the hypertrophic condition of the lateral condyle of the femur which simulated a neoplasm.

removal of the external jugular vein, although, of course, there was a certain mortality from its removal. This, however, was very small.

He had never employed the method which Dr. Crile suggested in regard to giving the anæsthetic in these cases. It impressed him very favorably. He had employed a somewhat similar scheme of using rubber tubes through the nose down to the epiglottis, and walling off with large pads in sponge holders in front of the epiglottis, without packing the pharynx, as Dr. Crile had suggested.

He had been very much impressed with one point in connection with carcinoma work generally about the face and head, and that was the desirability of ligating the external carotid. He had been a little afraid to interfere with the common carotid, but as almost a routine in his work he had ligated the external carotid in extensive malignant disease of the face, with some considerable satisfaction.

Dr. E. Wyllys Andrews said that to understand the work of Dr. Crile, it was necessary for surgeons to read his other contributions to the literature on this subject in the last few years, and particularly in the last year. He had known about this temporary clamping of the carotid artery for several years, but had never dared to resort to it himself, because he had not actually seen it used.

It was perfectly obvious that Dr. Crile had started out in a direction where there was absolutely no precedent in the kind of work he was doing on the head and neck. He had created a new field of surgery here. Anyone who would review the literature of the last few years must come to the conclusion that it was almost revolutionary. The comparison that Dr. Crile made with the Halsted operation on the breast and his operations upon the neck explained a great deal. The radical breast operation, as advocated first by Willy Meyer and later by Halsted, put breast surgery on a new status, and Dr. Crile had created a new surgical status for the neck and head. The surgery of these parts was exactly parallel in laying great emphasis on dealing with the lymphatics.

The speaker felt that his own work had not been radical enough. He had tied one of the carotid arteries many times, dissecting half of the jaw or face, cutting down, and thinking that

the only way to make the operation feasible was to tie the common carotid, thereby getting a high mortality, but finally ending by doing no such radical and successful work as had been accomplished by Dr. Crile in the remarkably ingenious steps which he had described. To think seriously, many novel things had been presented by the essayist. Three or four of the steps he had described were entirely unknown until brought out by him, as, for instance, taking off the sternocleidomastoid, sacrificing it, and liberally sacrificing the internal jugular vein all the way up, reflecting the great skin flaps, exposing the field away beyond the line where the normal glands lay, discovering the easy line of cleavage in this deep plane.

Dr. A. J. Ochsner said that some five years ago he had had the good fortune of seeing Dr. Crile work for three days. He also saw some of his early work in this field. Since that time he had employed Dr. Crile's clamp in a number of operations, and had used the position which he had demonstrated, and had borne in mind one of the features which Dr. Crile pointed out at that time very forcibly, but which he only hinted at now, and which was of very great importance, especially in operations for the removal of portions of the thyroid gland in cases of exophthalmic goitre. In that particular class of cases it was of especial value, namely, after thoroughly anæsthetizing the patient, elevating the head and leaving the patient in this position during the operation, one could readily complete the operation without any further use of the anæsthetic. The anæmia of the brain which occurred as the result of this change of position would cause the amount of anæsthetic which had been given previously to suffice for the entire operation. He believed that this one point now did away with the necessity of operating upon these patients under cocaine. The comfort of an excision of an exophthalmic goitre was tremendously increased by the method which Dr. Crile had introduced, in that the patient was thoroughly under the anæsthetic until the surgeon reached the point of separating the gland from the trachea. About that time the patient began to speak, so that the surgeon had the comfortable feeling of knowing that he had not injured the recurrent laryngeal. Hæmorrhage was controlled, the ligatures applied, and the patient placed in a horizontal position again, and, if necessary, an anæsthetic could be given for suturing the skin wound. Since he had learned the

application of this method to this one operation, he had gotten a lot of comfort out of it. These little clamps were very satisfactory; and from an examination of the retractor which Dr. Crile had shown, he was sure that he should use it hereafter, as it was much better than the bent spoon handle, or a similar retractor, in that it was out of the way and still did the work effectively. The dental intrument was an ingenious contrivance.

Dr. M. L. Harris said that without a practical knowledge of regional anatomy the valuable points which Dr. Crile had presented could not be clearly understood, nor their importance realized. A thorough knowledge of the lymphatic glands of the territories which were drained into certain lymphatic areas was of great importance. This was no better shown than in the difference in mortality rate from metastases which were found in cases of carcinoma of the lip and of the tongue. It had long been known that carcinoma of the tongue was much more malignant than carcinoma of the lip, and that operations for the removal of carcinoma of the tongue were much less successful than those for the removal of carcinoma of the lip. This was due largely to the lymphatic distribution. The lymphatics from the lip, for instance, converged to a more central point than do the lymphatics from the tongue. From the tongue the lymphatics pass to glands at the base of the tongue and the submental glands, to those in the upper triangle and to others as low down as the omohyoid muscle.

He emphasized the importance of removing the jugular vein in malignant diseases in these cases. This was again impressed upon him only recently. Two weeks ago he did an operation for carcinoma of the larynx, removing the glands in that vicinity. In removing the metastases in the glands of the neck he had to take away also all the vessels, namely, the common carotid, the external and internal carotid, and the jugular vein, in one mass. On examining the specimen subsequently to satisfy himself whether he had really done right in taking out so much of the blood supply, he was surprised to find on the inner wall of the internal jugular vein a small metastasis. He thought it was perfectly easy to leave such a metastasis. This case impressed upon him the great importance of sacrificing these vessels when necessary in these cases.

A German author, two or three years ago, in commenting on

the removal of the internal jugular vein, stated that statistics showed that the removal of the right internal jugular vein was five times more liable to be followed by brain trouble than the removal of the left, because of the fact that the left jugular foramen, at the base of the skull, was abnormal in size five times oftener than the right. In other words, the right internal jugular vein was larger and more uniform in size. He wondered if Dr. Crile had noticed any difference in the mortality on that account.

The little points of technique in the removal of the Gasserian ganglion would be appreciated by everyone who had done this operation, and, personally, he was indebted to Dr. Crile for bringing them out. This was particularly true as the surgeon had to operate in a limited space, and the bottom of the field of operation was consequently relatively very deep. Dr. Crile had spoken of placing forceps on the nerves, but this Dr. Harris thought took up more or less room, and he had found it of advantage to pass a silk ligature around the nerves, which enabled him to get rid of the forceps, and the nerves could be followed up without the interference of the forceps.

DR. DANIEL N. EISENDRATH asked Dr. Crile: First, after releasing the clamp following the temporary closure of the common carotid artery, to what extent did hæmorrhage follow the taking off of the clamp again from the terminal branches of the arteries? Second, in what percentage of his cases, if any, had there been cerebral embolism following temporary ligation of the common carotid? Third, whether he had ever performed a preliminary tracheotomy, or tracheotomy at any stage, at the time of the operation, or say a week before as a preliminary step?

He debated that question a good deal with himself lately in two cases of carcinoma of the tongue, one of which was an extensive carcinoma of this organ which was not brought to him until an ulcer had appeared at the floor of the mouth. He ligated both external carotids, but did not think it was necessary to perform a preliminary tracheotomy. The hæmorrhage was no greater than would follow the amputation of leg where a constrictor had been applied. This patient, however, died of aspiration pneumonia. Dr. Eisendrath asked Dr. Crile whether in such radical operations as this—carcinoma of the tongue, or carcinoma of the glands of the neck—he found it necessary to perform a preliminary tracheotomy. Fourth, given a case of

carcinoma of the lip in the early stage, or a carcinoma of the tongue which had not advanced to an extensive degree, would the operation be as radical as that which he had outlined, namely, removing the whole cervical lymph node area?

DR. D. W. GRAHAM said that, regarding the removal of the jugular vein, he had been accustomed, when he wanted to dissect out a carcinomatous mass in the region, to cut the vein and muscle just below the tumor, and following down towards the clavicle as far as was necessary; then ligating below, and turning the other end up with the tumor as high as it was deemed necessary to go. In these cases he had discovered that the lumen of the jugular vein was sometimes obliterated and frequently partially obliterated, so that beginning there it was probably easier to remove the vein down from that point than it would be to start just above the clavicle, although he could see how Dr. Crile's method might be better in some instances.

Regarding the removal of the Gasserian ganglion, he thought there was some advantage in what Dr. Crile had recommended in the use of the retractors exhibited. These narrow retractors would take up much less space than those surgeons had been accustomed to using. To enucleate the ganglion, he had usually employed blunt, curved scissors or a short-beaked, blunt hook. However, this dental instrument (the dental crowder, as he called it) seemed an ideal one, in that it was sharper and would enable one to do quicker work.

DR. CRILE, in closing the discussion said that in the case of brain anæmia, sensation was greatly lowered. Here Dr. Ochsner had made a distinct advance in the work from the point at which he left off.

Replying to the questions asked by Dr. Eisendrath, he said it was interesting to note that there was very little hæmorrhage after the clamp was taken off. The vessels were seen during the course of the operation, and after the removal of the clamps very little hæmorrhage ensued. The operative field was clean, so that one could pick up the vessels and tie them. He had never seen a case of cerebral embolism following the method he had described. However, if one squeezed the clamp or clamps too tightly, there might be the possibility of the formation of an embolus. Particularly would a thrombus be likely to be produced, and later embolism, if one were rough in his manipulations.

He had not for some time resorted to preliminary tracheotomy. He followed the teachings of some of his colleagues in putting patients in the upright position as early as possible after operations. He said he had a strong conviction that the foundation of a number of cases of septic pneumonia was laid at the time of the operation by too great exposure. When patients inhaled blood there was greater risk of septic pneumonia occurring. He was firmly convinced that with improved methods there were not as many cases of septic pneumonia now as formerly.

He would not make two operations at the same time in a case of cancer of the tongue, if he could avoid it. He would do the mouth operation first, possibly, and later on the operation on the neck. He would go low down in the neck, as he had pointed out in the demonstration.

As to whether or not, in an early case of cancer of the lip, he would make entire block dissection, he said he would not do so, but would do a regional block. In every case of superficial carcinoma he took out regionally, he had reason to believe that it was drained by the lymphatic area. He had this feeling, that as long as the glands of the neck were involved, no one knew or could tell in which direction the metastasis went, consequently when the glands were involved excision of at least half of the neck should be made.

In conclusion, he emphasized the point that it was much easier to do the larger operation than the smaller one.

COMBINED SUPERIOR TIBIOFIBULAR AND ASTRAGALO-FIBULAR OSTEOPLASTY AS A MEANS OF PREVENTING SHORTENING OF THE LEG DURING ADOLESCENCE FOLLOWING EXTENSIVE OSTEOMYELITIS.

Dr. Norman Kerr read a paper with the above title, for which see page 425.

Dr. A. J. Ochsner said there was one feature in connection with the surgical treatment of osteomyelitis which was not so generally applied as it should be. In cases of acute osteomyelitis of the long bones, in which there was an apparent destruction of the entire shaft, the activity of the periosteum in the formation

of a new bone was stimulated to a greater extent by the presence of the old shaft than by anything else that could be done. Some eighteen or nineteen years ago Dr. Parkes demonstrated the fact that in acute osteomyelitis almost a normal limb could be secured in practically every case, provided the primary operation consisted in splitting the periosteum from end to end and leaving the shaft as an irritant for the formation of the involucrum which usually resulted in almost a perfect new bone.

Dr. E. Wyllys Andrews said that Dr. Kerr was to be congratulated on obtaining such a result in the case reported in a comparatively short time, as usually the results in such cases could only be secured in years, rather than months.

Operations for sequestrotomy must not be done too early. A great deal of interest attaches to the formation of an involucrum. This, when allowed to occur, insures proper length and support.

In this connection he would make a plea for the use of the Moorhof bone plug in cases where bone defects were to be filled. He thought there was nothing more advantageous than this plug in this and similar classes of cases. The materials of this bone plug mixture were iodoform, spermaceti, and oleum sesami. These ingredients were slowly heated to 100° C., and when allowed to cool would form a soft solid which would remain solid at the temperature of the body, and for use it was heated to 50° C., being constantly stirred to keep the iodoform evenly distributed. This material would fill a cavity in bone just as well as the dental surgeon filled a cavity with amalgam. The wound could be closed over it. There would soon be the formation of new bone, gradually displacing the plug, and primary healing of the wound.

CONGENITAL ATRESIA OF THE ILEUM.

Dr. William Hessert exhibited a specimen removed from an infant, five days old. The history, as given by the mother, was that the baby had not had a bowel movement since birth, and the attending physician had informed him that at birth there was no escape of meconium. The patient showed the typical symptoms of intestinal obstruction—vomiting, distended abdomen, and was in a low condition. On opening the abdomen,

dilated coils of intestine presented, and in following them down he found that the ileum ended below in a blind pouch. It was much larger then than it was now. It was filled with fæces to almost the size of one's fist. There was no connection between the ileum and the colon. The ileum ended in a blind pouch, and the colon was to the right, greatly contracted. It was impossible to make any sort of anastomosis between the ileum and colon. He opened the blind pouch, allowed the gases and fæces to escape, and then sutured it to the abdominal wound. The child died the next day. He presented the case as a pathological curiosity.